

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VI (NEW) EXAMINATION – WINTER 2023****Subject Code:3160608****Date:18-12-2023****Subject Name:Urban Transportation Planning****Time:02:30 PM TO 05:00 PM****Total Marks:70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

Simple and non-programmable scientific calculators are allowed.

		Marks												
Q.1	(a) Define: 1) Goal 2) Mobility 3) Hamlet	03												
	(b) Discuss various urban class groups?	04												
	(c) Define urban area? State the reasons of urbanization. Discuss merits and demerits of urbanization.	07												
Q.2	(a) Define: 1) Load factor 2) Urban Structure 3) Rural area	03												
	(b) Explain transportation system management (TSM) strategies.	04												
	(c) Elaborate the BRTS. Write advantages and disadvantages of it.	07												
	OR													
	(c) Discuss the factors responsible for travel demand. Explain in detail.	07												
Q.3	(a) Write short note on : Network identification and Coding of the zone.	03												
	(b) Discuss the points to be kept in mind while doing zoning.	04												
	(c) Enlist the methods of origin and destination study. Explain home interview method in detail.	07												
	OR													
Q.3	(a) Give the uses of O & D study.	03												
	(b) Explain various survey data checks.	04												
	(c) Explain in brief - License plate survey method.	07												
Q.4	(a) Define: 1) Cordon line 2) Trip 3) Land use	03												
	(b) Write short note on : Diversion curve method.	04												
	(c) Describe Gravity model with formula showing each parameters.	07												
	OR													
Q.4	(a) Define: 1) Base year 2) Screen Line 3) Desire line	03												
	(b) Write short note on : All - or - nothing assignment method.	04												
	(c) The following data shows average household size and total trips made per day for a particular zone of study area. Develop the trip production equation and check its validity.	07												
	<table><tr><th>Average Household size</th><th>Total trips made per day</th></tr><tr><td>2</td><td>4</td></tr><tr><td>3</td><td>6</td></tr><tr><td>4</td><td>7</td></tr><tr><td>5</td><td>8</td></tr><tr><td>6</td><td>10</td></tr></table>	Average Household size	Total trips made per day	2	4	3	6	4	7	5	8	6	10	
Average Household size	Total trips made per day													
2	4													
3	6													
4	7													
5	8													
6	10													
Q.5	(a) Explain Logit model analysis in brief.	03												
	(b) Explain any one growth factor models for trip distribution.	04												
	(c) Describe briefly : Corridor identification and corridor screen line analysis.	07												
	OR													
Q.5	(a) Explain in brief, with neat figure – Corridor.	03												
	(b) Define route assignment and Discuss the factors affecting route assignment.	04												
	(c) Define urban forms. Describe the characteristics of each related to the transportation planning.	07												

\*\*\*\*\*